

TABLE 1 LENGTH	
DART LONGLINE PART NUMBER CODE	DESCRIPTION
DALL-###-#	REPLACE FIRST # WITH LONG LINE TOTAL LENGTH IN FEET (MAX 200)

TABLE 2 CAPACITY	
DART LONGLINE PART NUMBER CODE	CAPACITY (LBS)
DALL-#-A-##	2500
DALL-#-B-##	3000
DALL-#-C-##	4400
DALL-#-D-##	5400
DALL-#-E-##	7300
DALL-#-F-##	9700
DALL-#-G-##	13 200

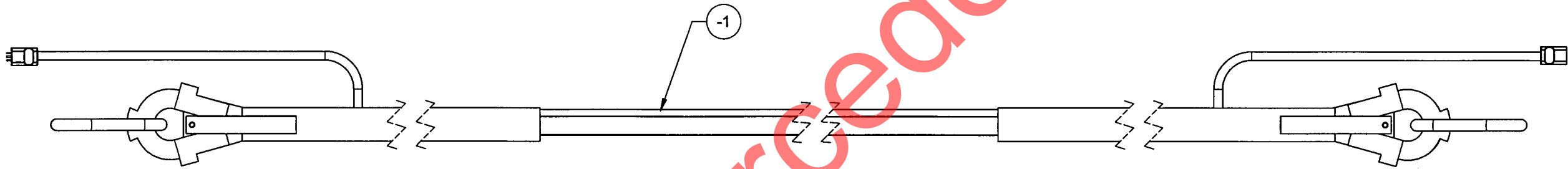
TABLE 3 END HARDWARE OPTION	
DART LONGLINE PART NUMBER CODE	OPTION DESCRIPTION
DALL-##-A-#	WITH PEAR SHAPED LIFTING RING
DALL-##-B-#	WITHOUT PEAR SHAPED LIFTING RING

TABLE 4 ELECTRICAL	
DART LONGLINE PART NUMBER CODE	ELECTRICAL WIRE DESCRIPTION
DALL-###-A	3 CONDUCTOR 14 GA
DALL-###-B	3 CONDUCTOR 12 GA
DALL-###-C	4 CONDUCTOR 14 GA
DALL-###-D	6 CONDUCTOR 16 GA
DALL-###-E	8 CONDUCTOR 16 GA
DALL-###-F	NO ELECTRICAL

C	TULMAR COMMENTS INCORPORATED	18-778	ML
B	TULMAR COMMENTS INCORPORATED, THIMBLE MATERIAL IS NOW STAINLESS, ELECTRICAL WIRE TABLE UPDATED, 15 700 LB LONGLINE REMOVED	18-770	VM
A	NEW ISSUE	18-585	VM
REV.	DESCRIPTION	ECN #	BY
DESIGN	VM	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	ML	TOOL PART #	REV. C
MFG. APPR.	FK	DALL-##-##-#	SHEET 1 OF 23
APPROVED		TITLE	SCALE
DATE 7/24/2018		DART LONG LINE	NTS
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DALL - # - # - # - #  
PART NUMBER = DALL- (LENGTH) - (CAPACITY P/N CODE) - (END HARDWARE P/N CODE) - (ELECTRICAL P/N CODE)  
EXAMPLE: DALL-100-A-A-A = DART LONG LINE, 100 FEET LONG, 2500 LBS CAPACITY, WITH LIFTING RING AND 3 CONDUCTOR 14 GAUGE WIRE

ITEM #	QTY	PART #	PART TITLE
-1	1	DALL-#-#-#-1	DART LONG LINE
-21	1	DALL-#-#-#-21	DART AEROSPACE BAG
22	2	McMaster#1632T22 OR EQUIV	ID TAG
23	2	McMaster#90905A673 OR EQUIV	SS SPLIT RING 1-1/16" OD.

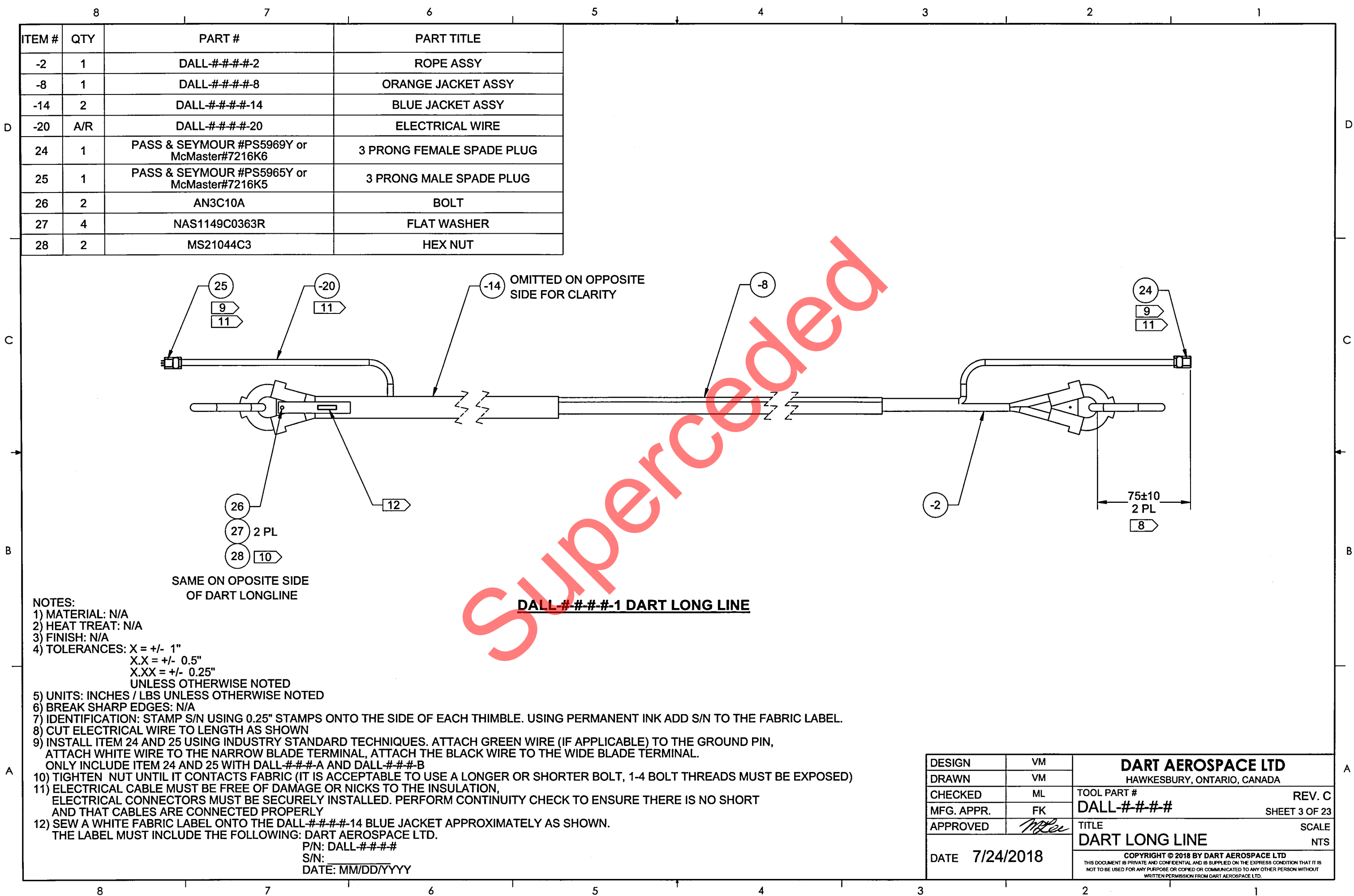


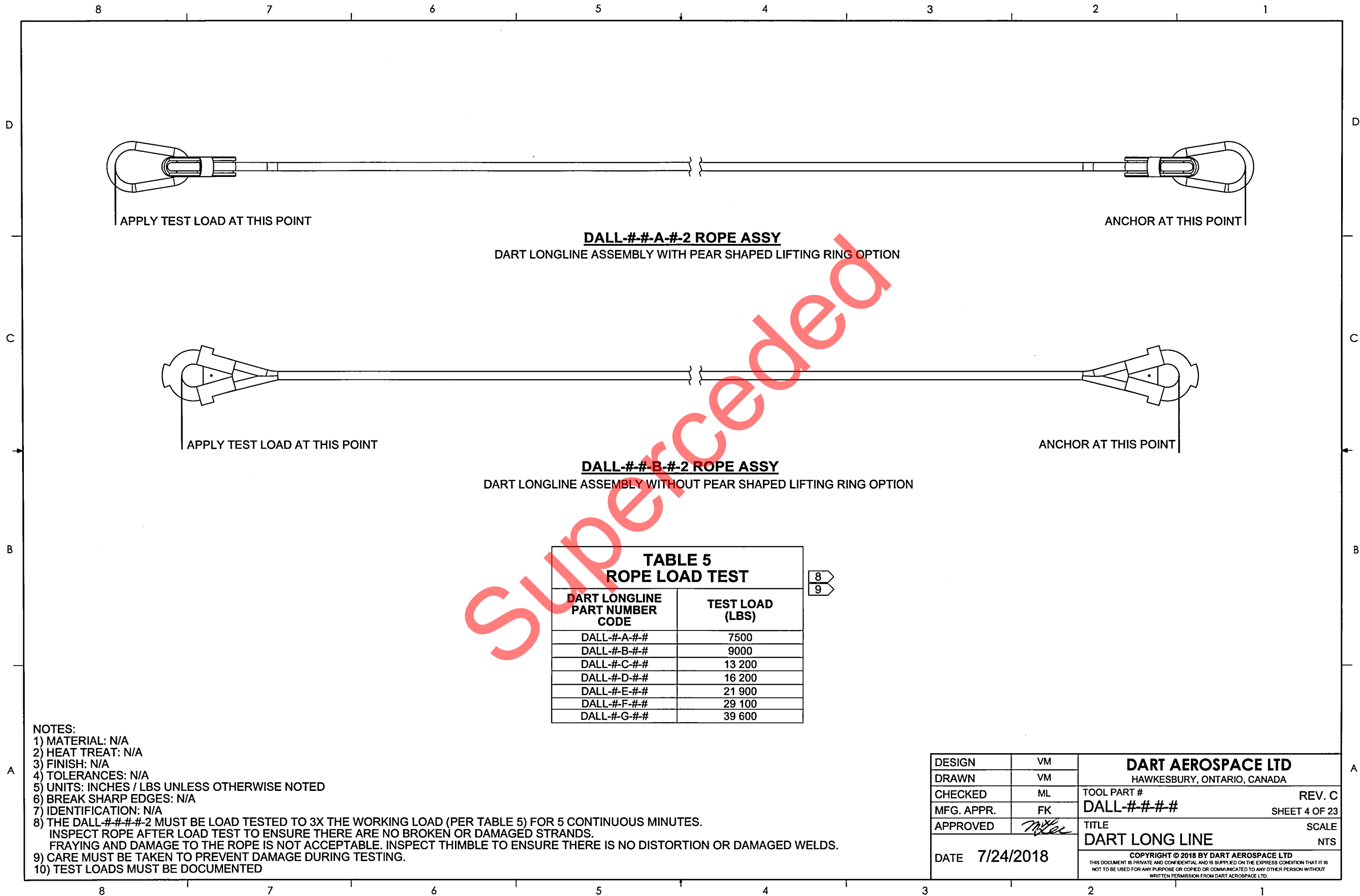
~~DALL-#-#-#~~ DART LONG LINE

NOTES:  
1) MATERIAL: N/A  
2) HEAT TREAT: N/A  
3) FINISH: N/A  
4) TOLERANCES: N/A  
5) UNITS: INCHES / LBS UNLESS OTHERWISE NOTED  
6) BREAK SHARP EDGES: N/A  
7) IDENTIFICATION: DOT MARK THE FOLLOWING INFO ONTO BOTH ID TAGS: P/N: DALL-#-#-#  
W/O: XXXXXX  
S/N: XXXXXX  
DATE: MM/DD/YYYY

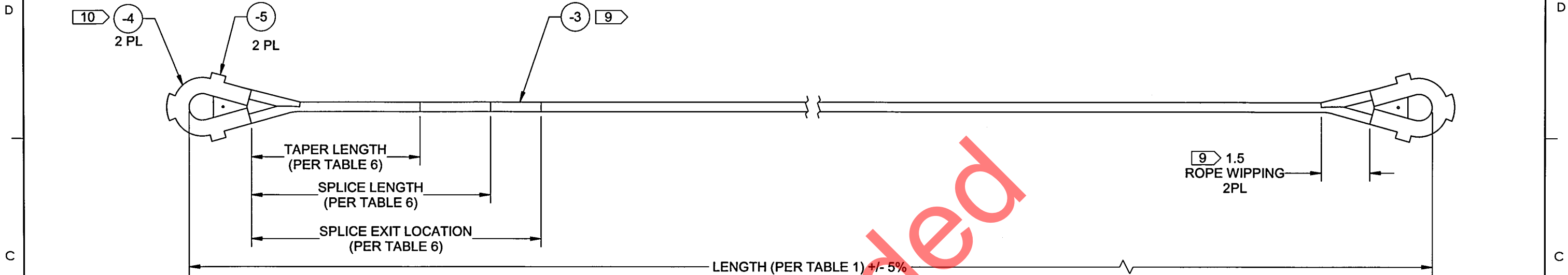
8) ATTACH ONE ID TAG TO THE BAG ZIPPER WITH THE SPLIT RING AND PLACE THE OTHER ID TAG AND SPLIT RING INTO THE BAGS SIDE POCKET  
9) COIL ROPE INTO BAG

DESIGN	VM	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	ML	TOOL PART #	REV. C
MFG. APPR.	FK	DALL-#-#-#	SHEET 2 OF 23
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DATE 7/24/2018		DART LONG LINE	NTS
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ITEM #	QTY	PART #	PART TITLE
-3	1	DALL-###-3	ROPE
-4	2	DALL-###-4	FABRIC WEARPAD
-5	2	DALL-###-5	THIMBLE ASSY



DALL-###-2 ROPE ASSY  
(SHOWN ASSEMBLED)

TABLE 6  
FABRICATION MEASUREMENTS

DART LONGLINE PART NUMBER CODE	SPLICE LENGTH (INCHES)	TAPER LENGTH (INCHES)	SPLICE EXIT LOCATION (INCHES)	THIMBLE CIRCUMFERENCE (INCHES)
DALL-#-A-##	25	8	30	9
DALL-#-B-##	30	10	35	10
DALL-#-C-##	35	10	40	10
DALL-#-D-##	40	13	50	10
DALL-#-E-##	45	13	55	14
DALL-#-F-##	50	16	65	14
DALL-#-G-##	60	20	75	17

- NOTES:  
1) MATERIAL: N/A  
2) HEAT TREAT: N/A  
3) FINISH: N/A  
4) TOLERANCES: X = +/- 1"  
X.X = +/- 0.5"  
X.XX = +/- 0.25"  
UNLESS OTHERWISE NOTED  
5) UNITS: INCHES / LBS UNLESS OTHERWISE NOTED  
6) BREAK SHARP EDGES: N/A  
7) IDENTIFICATION: N/A  
8) ROPE CUT LENGTH FORMULA = (SPLICE LENGTH PER TABLE 6 + 3" + THIMBLE CIRCUMFERENCE PER TABLE 6) + (REQUIRED TOTAL LENGTH - 1%)  
9) PREPARE THE ROPE SPLICE AS FOLLOWS:  
A) MEASURING FROM THE END OF THE ROPE, MARK THE SPLICE LENGTH, TAPER LENGTH AND EXIT LOCATION PER TABLE 6  
B) PASS THE ROPE THROUGH THE THIMBLE AND FABRIC WEARPAD UNTIL THE SPLICE LENGTH MARK IS 1.5" FROM THE BASE OF THE THIMBLE  
C) MAKE A MARK 1.5" FROM THE BASE OF THE THIMBLE ON THE OTHER SIDE OF THE ROPE (BESIDE THE FIRST SPLICE LENGTH MARK)  
D) PLACE THE END OF THE ROPE IN THE SPLICING FID  
E) AT THE LOCATION MARKED AT STEP "C", CAREFULLY INSERT THE SPLICING FID IN THE CENTER OF THE ROPE  
F) WORK THE SPLICING FID ALONG THE HOLLOW CENTER OF THE ROPE AND EXIT AT THE SPLICE EXIT LOCATION MARK MADE EARLIER  
G) REMOVE THE SPLICING FID  
H) MARK EVERY FOURTH "S" / "Z" STRAND STARTING AT THE TAPER MARK. CUT AND REMOVE THE MARKED STRANDS  
I) MARK AND THEN CUT THE NEXT THREE CONSECUTIVE STRANDS NEAR THE END OF THE ROPE  
J) CUT THE TIP OF THE REMAINING STRANDS AT AN ANGLE  
K) CAREFULLY SMOOTH THE ROPE AWAY FROM THE THIMBLE (THE TAPER WILL NOW BE INSIDE OF THE ROPE)  
L) ENSURE THE MARKS CLOSEST TO THE THIMBLE ARE ALIGNED (APPROXIMATELY 1.5" FROM THE BASE OF THE THIMBLE)  
M) ONCE THE ROPE SPLICE IS COMPLETE THE ROPE MUST BE TIGHTLY "WHIPPED" AT APPROXIMATELY 1.5" FROM THE BASE OF THE THIMBLE USING 5-10 WRAPS OF 1/16" CORD.  
N) REPEAT THE STEPS ABOVE ON THE OPPOSITE SIDE OF THE LONGLINE.  
10) THE -4 FABRIC WEARPAD MUST BE MANUFACTURED FROM ABRASION RESISTANT NYLON OR ARAMID FABRIC. THE WEARPAD MUST TIGHTLY FIT AROUND THE ROPE AND EXTEND 1.0" BELOW THE BASE OF THE THIMBLE

DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	ML	TOOL PART #	REV. C
MFG. APPR.	FK	DALL-###-#	SHEET 5 OF 23
APPROVED	<i>M. Lee</i>	TITLE	SCALE
DATE 7/24/2018		DART LONG LINE	NTS
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ROPE Ø (SEE TABLE 7)

TOTAL LENGTH

TABLE 7  
ROPE MATERIAL

DART LONGLINE PART NUMBER CODE	MATERIAL PART NUMBER	DESCRIPTION
DALL-#-A-##	SUPREEMX-12™ DYNEEMA® X Ø 3/8" OR EQUIVALENT	Ø 3/8" 12 STRAND ROPE, 17 550 LBS MIN TENSILE STRENGTH
DALL-#-B-##	SUPREEMX-12™ DYNEEMA® X Ø 7/16" OR EQUIVALENT	Ø 7/16" 12 STRAND ROPE, 21 150 LBS MIN TENSILE STRENGTH
DALL-#-C-##	SUPREEMX-12™ DYNEEMA® X Ø 1/2" OR EQUIVALENT	Ø 1/2" 12 STRAND ROPE, 30 600 LBS MIN TENSILE STRENGTH
DALL-#-D-##	SUPREEMX-12™ DYNEEMA® X Ø 9/16" OR EQUIVALENT	Ø 9/16" 12 STRAND ROPE, 37 080 LBS MIN TENSILE STRENGTH
DALL-#-E-##	SUPREEMX-12™ DYNEEMA® X Ø 5/8" OR EQUIVALENT	Ø 5/8" 12 STRAND ROPE, 47 250 LBS MIN TENSILE STRENGTH
DALL-#-F-##	SUPREEMX-12™ DYNEEMA® X Ø 3/4" OR EQUIVALENT	Ø 3/4" 12 STRAND ROPE, 59 400 LBS MIN TENSILE STRENGTH
DALL-#-G-##	SUPREEMX-12™ DYNEEMA® X Ø 7/8" OR EQUIVALENT	Ø 7/8" 12 STRAND ROPE, 85 500 LBS MIN TENSILE STRENGTH

DALL-#-#-#-3 ROPE

8

NOTES:  
1) MATERIAL: REFER TO TABLE 7  
2) HEAT TREAT: N/A  
3) FINISH: N/A  
4) TOLERANCES: N/A  
5) UNITS: INCHES / LBS UNLESS OTHERWISE NOTED  
6) BREAK SHARP EDGES: N/A  
7) IDENTIFICATION: N/A  
8) NO ROPE COLOR REQUIREMENTS

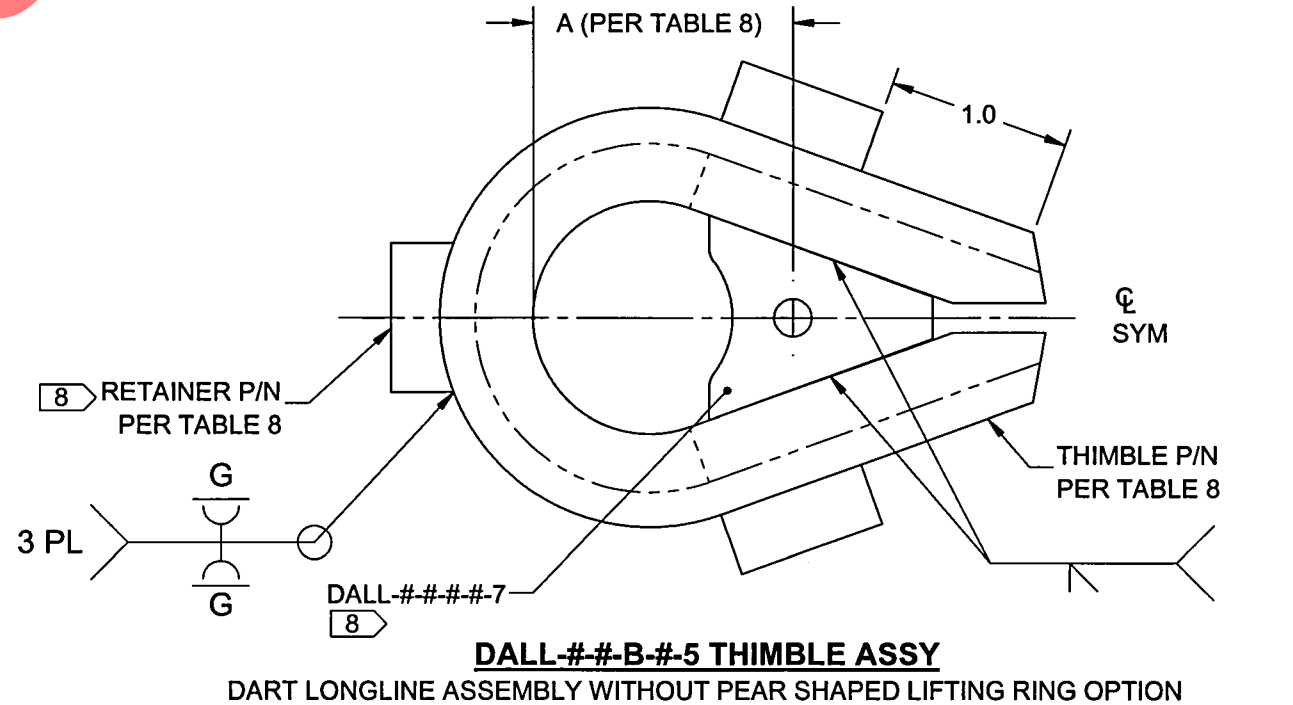
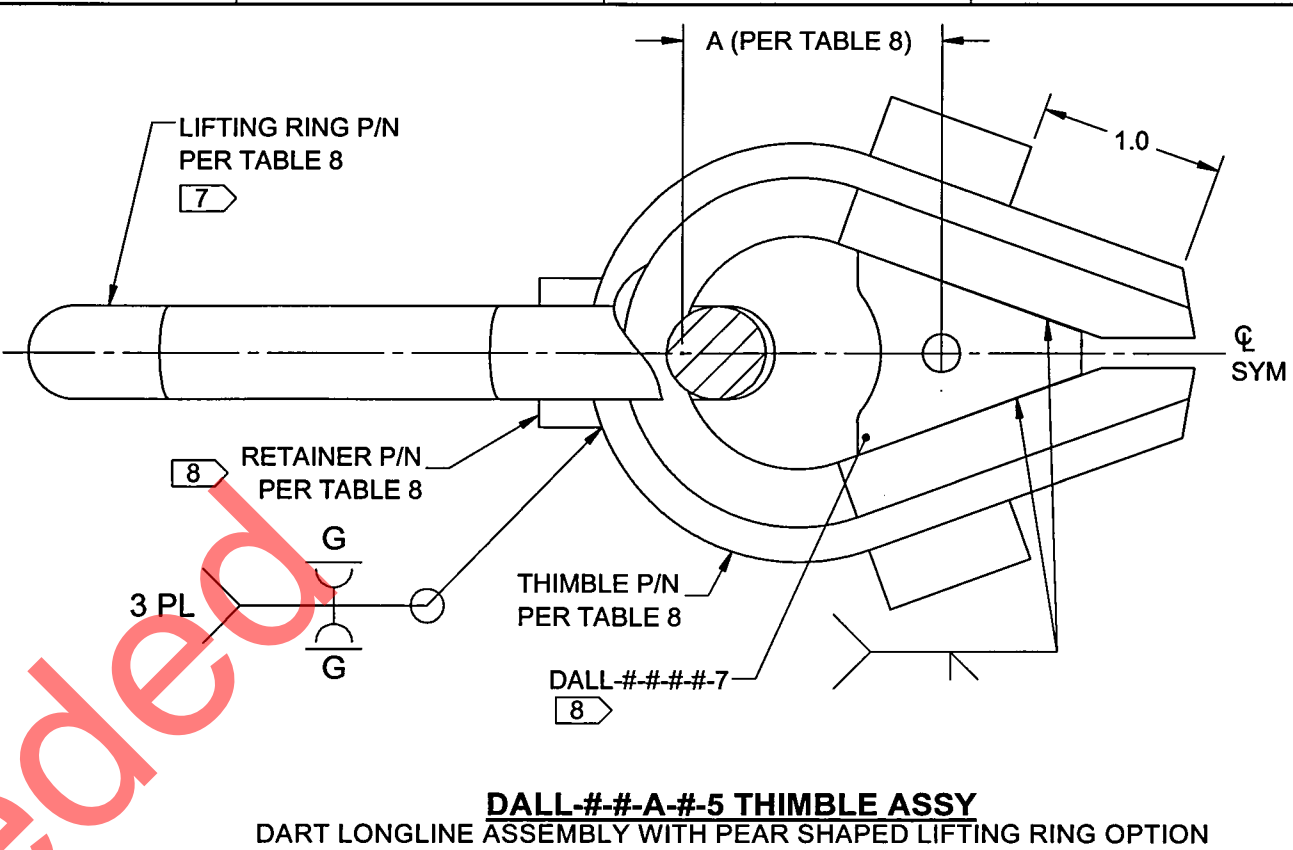
DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM	TOOL PART #	REV. C
CHECKED	ML	DALL-#-#-#-#	SHEET 6 OF 23
MFG. APPR.	FK	TITLE	SCALE
APPROVED		DART LONG LINE	NTS
DATE 7/24/2018		COPYRIGHT © 2018 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

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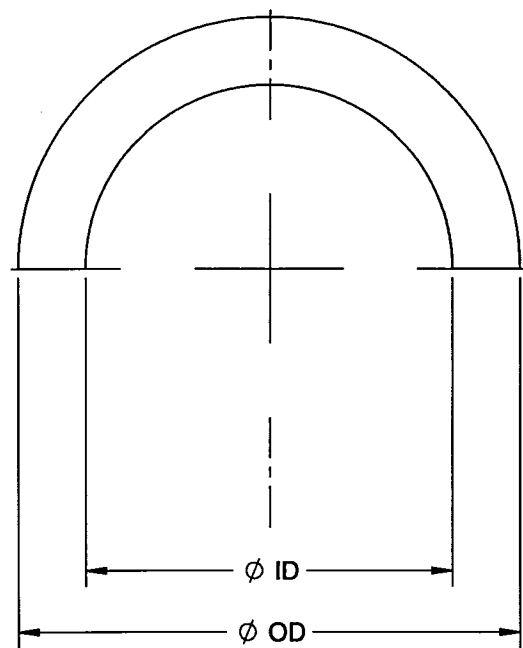


TABLE 8 THIMBLE ASSY AND END HARDWARE (TO USE TABLE SELECT APPROPRIATE DART LONGLINE PART NUMBER CODE IN COLUMN ONE THEN MANUFACTURE THIMBLE ASSY USING ITEMS IN THE SAME ROW)						
			ASSEMBLY INFO			
DART LONGLINE PART NUMBER CODE	THIMBLE ASSY PART NUMBER	DESCRIPTION	RETAINER PART NUMBER	PURCHASE THIMBLE PART NUMBER (McMASTER CARR)	PURCHASE LIFTING RING PART NUMBER (McMASTER CARR)	DIMENSION A
DALL-#A-A-#	DALL-#A-A-#5	THIMBLE WITH 1/2" PEAR RING	DALL-#A-A-#6	(9/16") 3495T41 OR EQUIVALENT	3570T34 OR EQUIVALENT	2.0
DALL-#B-A-#	DALL-#A-A-#5	THIMBLE WITH 1/2" PEAR RING	DALL-#A-A-#6	(9/16") 3495T41 OR EQUIVALENT	3570T34 OR EQUIVALENT	2.0
DALL-#C-A-#	DALL-#C-A-#5	THIMBLE WITH 3/4" PEAR RING	DALL-#C-A-#6	(5/8") 3495T51 OR EQUIVALENT	3570T35 OR EQUIVALENT	2.6
DALL-#D-A-#	DALL-#C-A-#5	THIMBLE WITH 3/4" PEAR RING	DALL-#C-A-#6	(5/8") 3495T51 OR EQUIVALENT	3570T35 OR EQUIVALENT	2.6
DALL-#E-A-#	DALL-#E-A-#5	THIMBLE WITH 3/4" PEAR RING	DALL-#E-A-#6	(3/4") 3495T49 OR EQUIVALENT	3570T35 OR EQUIVALENT	3.0
DALL-#F-A-#	DALL-#F-A-#5	THIMBLE WITH 3/4" PEAR RING	DALL-#F-A-#6	(7/8") 3495T42 OR EQUIVALENT	3570T35 OR EQUIVALENT	3.4
DALL-#G-A-#	DALL-#G-A-#5	THIMBLE WITH 3/4" PEAR RING	DALL-#F-A-#6	(1") 3495T43 OR EQUIVALENT	3570T35 OR EQUIVALENT	3.5
DALL-#A-B-#	DALL-#A-B-#5	THIMBLE ONLY	DALL-#A-A-#6	(9/16") 3495T41 OR EQUIVALENT	N/A	2.0
DALL-#B-B-#	DALL-#A-B-#5	THIMBLE ONLY	DALL-#A-A-#6	(9/16") 3495T41 OR EQUIVALENT	N/A	2.0
DALL-#C-B-#	DALL-#C-B-#5	THIMBLE ONLY	DALL-#C-A-#6	(5/8") 3495T51 OR EQUIVALENT	N/A	2.6
DALL-#D-B-#	DALL-#C-B-#5	THIMBLE ONLY	DALL-#C-A-#6	(5/8") 3495T51 OR EQUIVALENT	N/A	2.6
DALL-#E-B-#	DALL-#E-B-#5	THIMBLE ONLY	DALL-#E-A-#6	(3/4") 3495T49 OR EQUIVALENT	N/A	3.0
DALL-#F-B-#	DALL-#F-B-#5	THIMBLE ONLY	DALL-#F-A-#6	(7/8") 3495T42 OR EQUIVALENT	N/A	3.4
DALL-#G-B-#	DALL-#G-B-#5	THIMBLE ONLY	DALL-#F-A-#6	(1") 3495T43 OR EQUIVALENT	N/A	3.5

- NOTES:  
1) MATERIAL: N/A  
2) HEAT TREAT: N/A  
3) FINISH: N/A  
4) TOLERANCES: X.X = +/- 0.05" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"  
5) UNITS: INCHES / LBS UNLESS OTHERWISE NOTED  
6) BREAK SHARP EDGES: 0.005" TO 0.010"  
7) SPREAD THE THIMBLE APART AS NECESSARY AT THE OPENING IN ORDER TO INSTALL THE LIFTING RING, BEND BACK INTO POSITION ONCE THE LIFTING RING IS INSTALLED  
8) TRIM/GRIND THE DALL-####6 RETAINER AND THE DALL-####7 GUSSET TO MATCH THIMBLE PROFILE  
9) IT IS ACCEPTABLE TO BENT THE THIMBLE IN / OUT TO PERMIT INSTALLATION OF THE DALL-####7 GUSSET  
10) THE FINISHED ASSEMBLY MUST HAVE NO SHARP EDGES OR BURRS



DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	ML	TOOL PART #	REV. C
MFG. APPR.	FK	DART-####	SHEET 7 OF 23
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DATE 7/24/2018		DART LONG LINE	NTS
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DALL-#-#-#-6 RETAINER

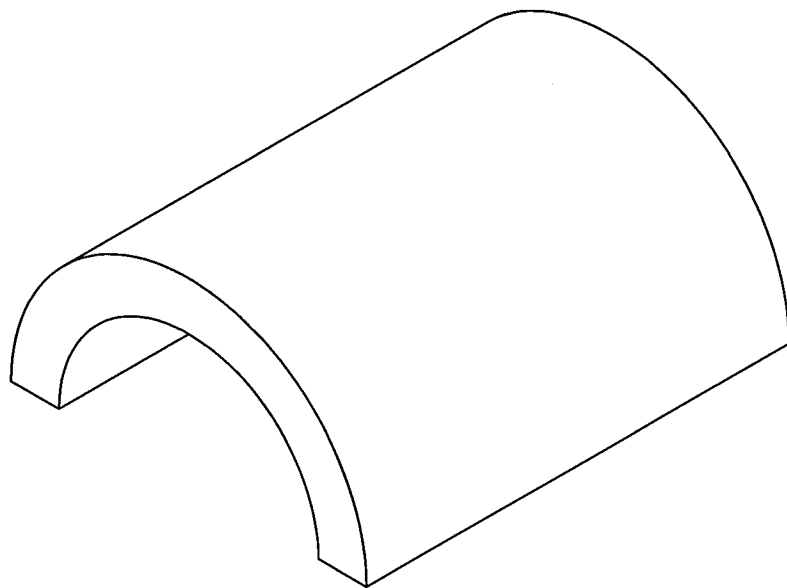
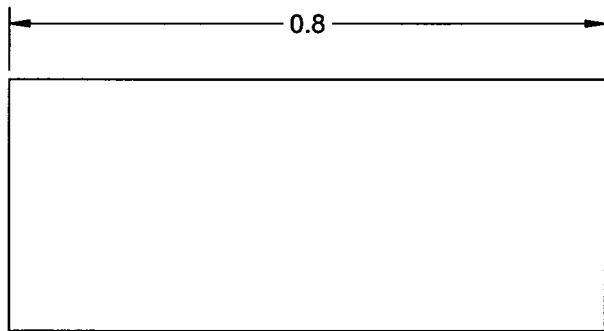


TABLE 9  
RETAINER

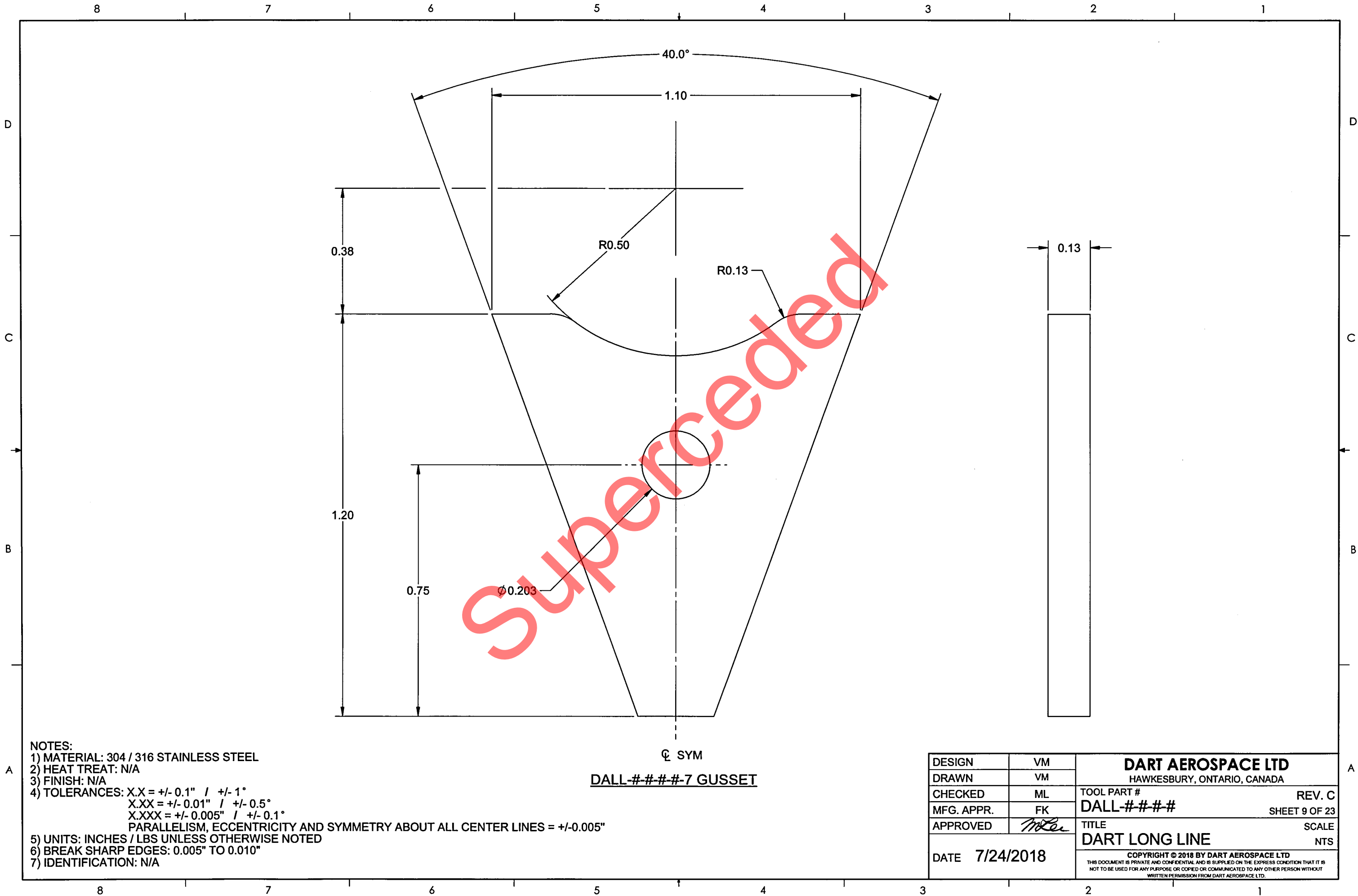
RETAINER PART NUMBER	Ø ID REF	Ø OD REF	PURCHASE RAW MATERIAL (MCMaster CARR REF)
DALL-#-A-A-#-6	0.6	0.8	44635K251
DALL-#-C-A-#-6	0.8	1.0	44635K261
DALL-#-E-A-#-6	1.0	1.3	4804T151
DALL-#-F-A-#-6	1.3	1.5	89495K255

NOTES:

- 1) MATERIAL: 18-8 / 304 / 316 STAINLESS STEEL, REFER TO TABLE 9 AND NOTE 9  
2) HEAT TREAT: N/A  
3) FINISH: N/A  
4) TOLERANCES: X.X = +/- 0.05" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"  
5) UNITS: INCHES / LBS UNLESS OTHERWISE NOTED  
6) BREAK SHARP EDGES: N/A  
7) IDENTIFICATION: N/A  
8) RETAINER IS TRIMMED TO FIT AT ASSY  
9) THE RETAINER MUST BE MANUFACTURED FROM STAINLESS STEEL PIPE THAT HAS THE SAME OD AND ID AS THE THIMBLE BEING ASSEMBLED.

DESIGN	VM	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	ML	TOOL PART #	REV. C
MFG. APPR.	FK	<b>DALL-#-#-#</b>	SHEET 8 OF 23
APPROVED	<i>ML</i>	TITLE	SCALE
DATE 7/24/2018		<b>DART LONG LINE</b>	NTS
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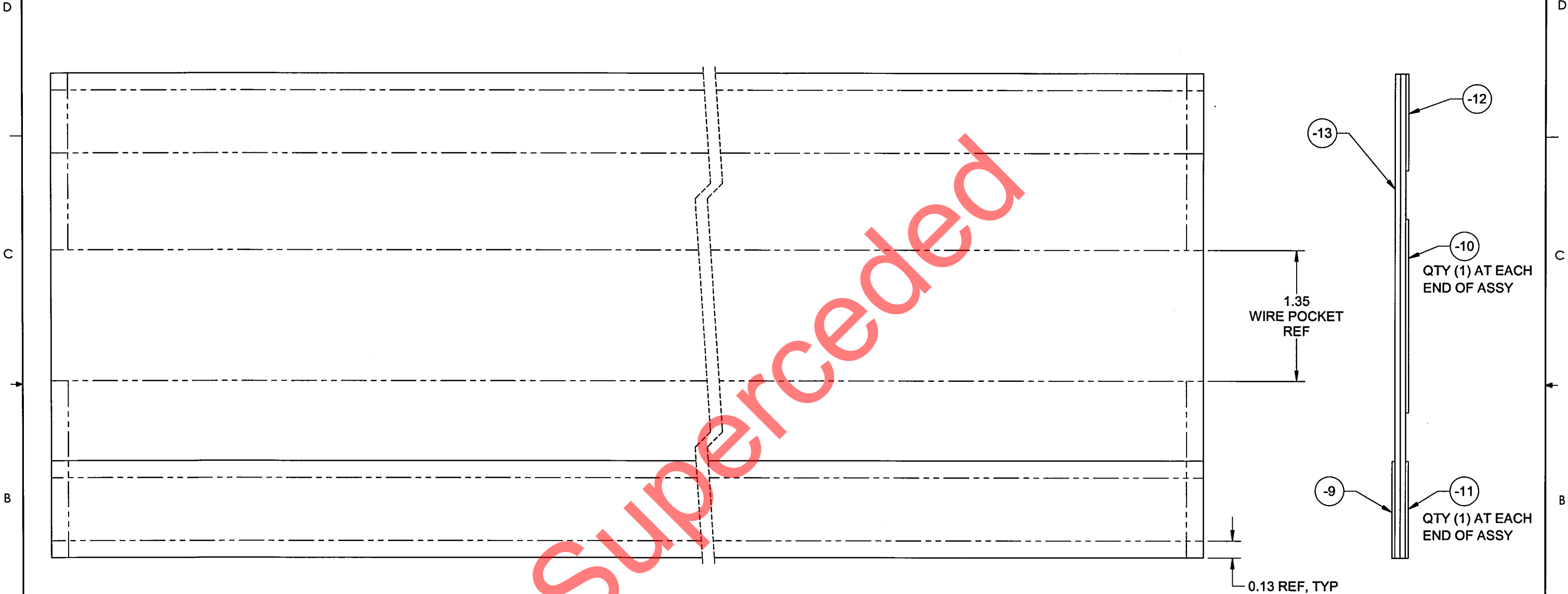
NOTES:

- 1) MATERIAL: 304 / 316 STAINLESS STEEL
- 2) HEAT TREAT: N/A
- 3) FINISH: N/A
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"
- 5) UNITS: INCHES / LBS UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005" TO 0.010"
- 7) IDENTIFICATION: N/A

DALL-#-#-#-7 GUSSET

DESIGN	VM	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	ML	TOOL PART #	REV. C
MFG. APPR.	FK	<b>DALL-#-#-#</b>	SHEET 9 OF 23
APPROVED	<i>ML</i>	TITLE	SCALE
DATE 7/24/2018		<b>DART LONG LINE</b>	NTS
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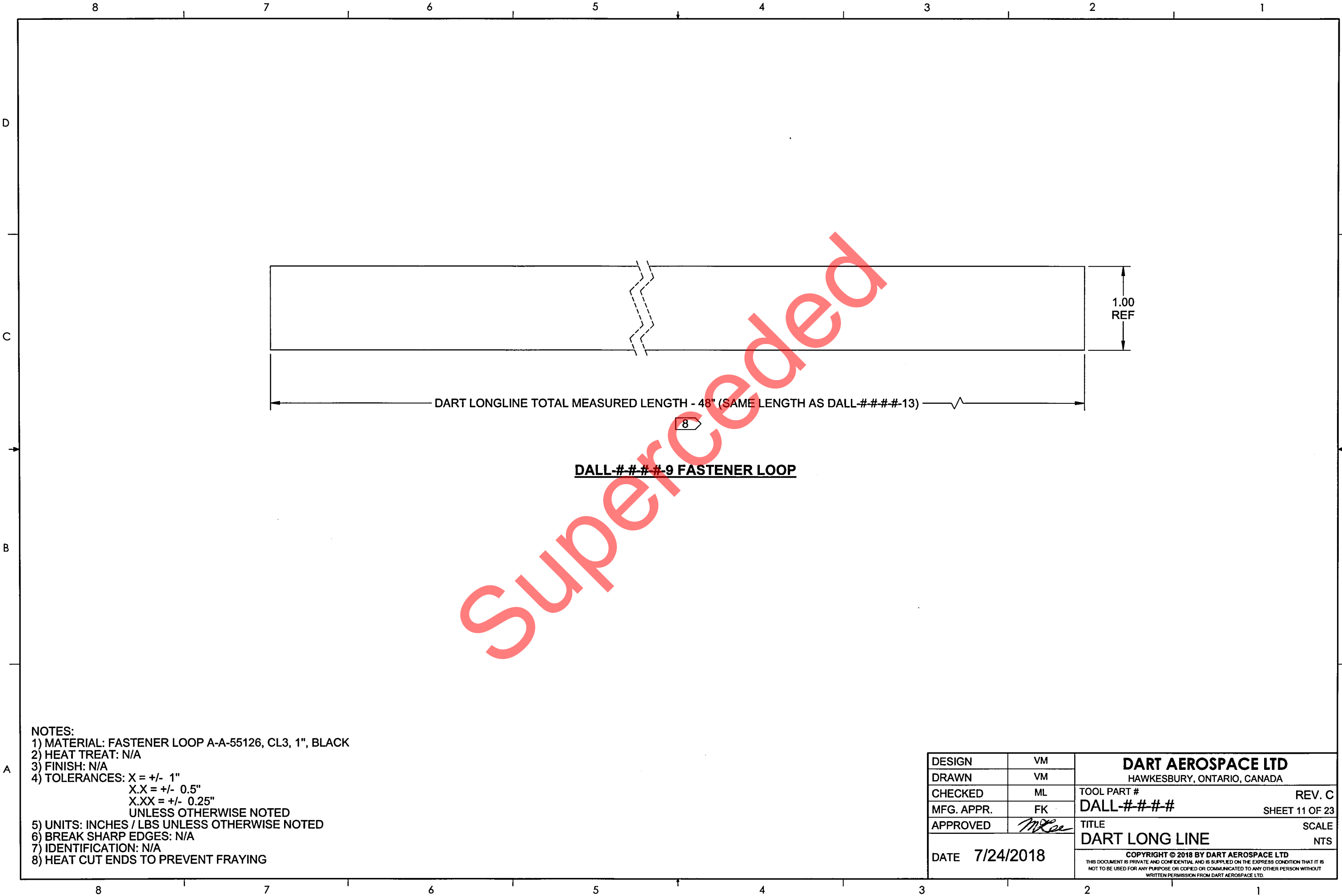
ITEM #	QTY	PART #	PART TITLE
-9	1	DALL-###-9	FASTENER LOOP
-10	2	DALL-###-10	FASTENER HOOK
-11	2	DALL-###-11	FASTENER HOOK
-12	1	DALL-###-12	FASTENER HOOK
-13	1	DALL-###-13	ORANGE JACKET



**DALL-###-8 ORANGE JACKET ASSY**

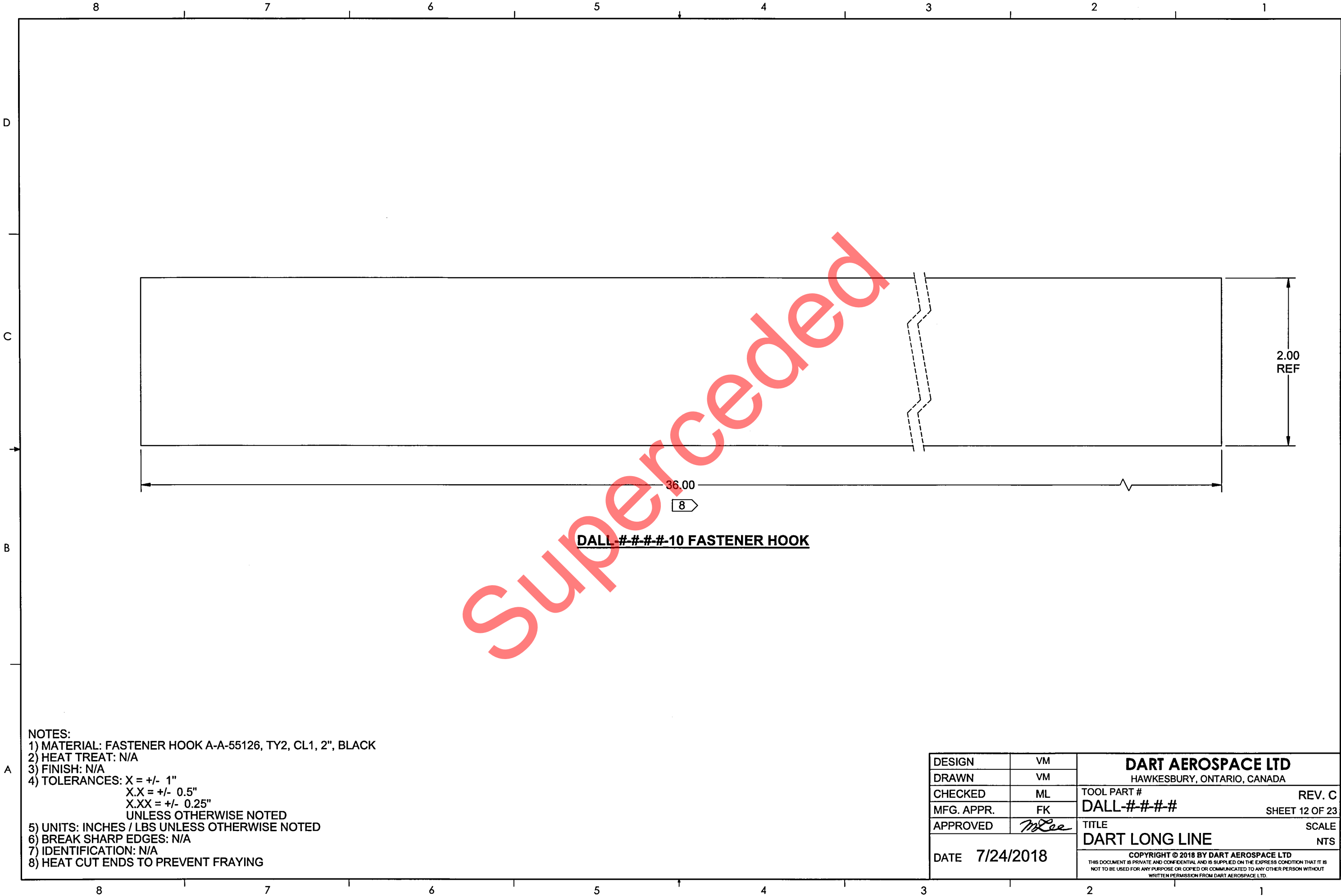
- NOTES:
- 1) MATERIAL: N/A
  - 2) HEAT TREAT: N/A
  - 3) FINISH: N/A
  - 4) TOLERANCES: X = +/- 1"  
X.X = +/- 0.5"  
X.XX = +/- 0.25"  
UNLESS OTHERWISE NOTED
  - 5) UNITS: INCHES / LBS UNLESS OTHERWISE NOTED
  - 6) BREAK SHARP EDGES: N/A
  - 7) IDENTIFICATION: N/A
  - 8) SEW ITEMS TOGETHER AS SHOWN
  - 9) STITCHING TO BE IAW ASTM D6193, TYPE 301, 6-10 STITCHES PER INCH, MINIMUM (1/2IN) BACKSTITCH, (1/2IN) SEAM ALLOWANCE, (1/2IN) TURNBACKS WHERE SHOWN, (1/8IN) FROM EDGE, ADDITIONAL ROWS OF SEWING ARE ACCEPTABLE TO ASSIST IN ASSEMBLY
  - 10) PHANTOM LINES REPRESENT STITCHING
  - 11) FASTNER LOOP/HOOK MUST BE ALIGNED WITH END OF ORANGE JACKET BEFORE SEWING

DESIGN	VM	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	ML	TOOL PART #	REV. C
MFG. APPR.	FK	<b>DALL-###</b>	SHEET 10 OF 23
APPROVED	<i>ML</i>	TITLE	SCALE
DATE 7/24/2018		<b>DART LONG LINE</b>	NTS
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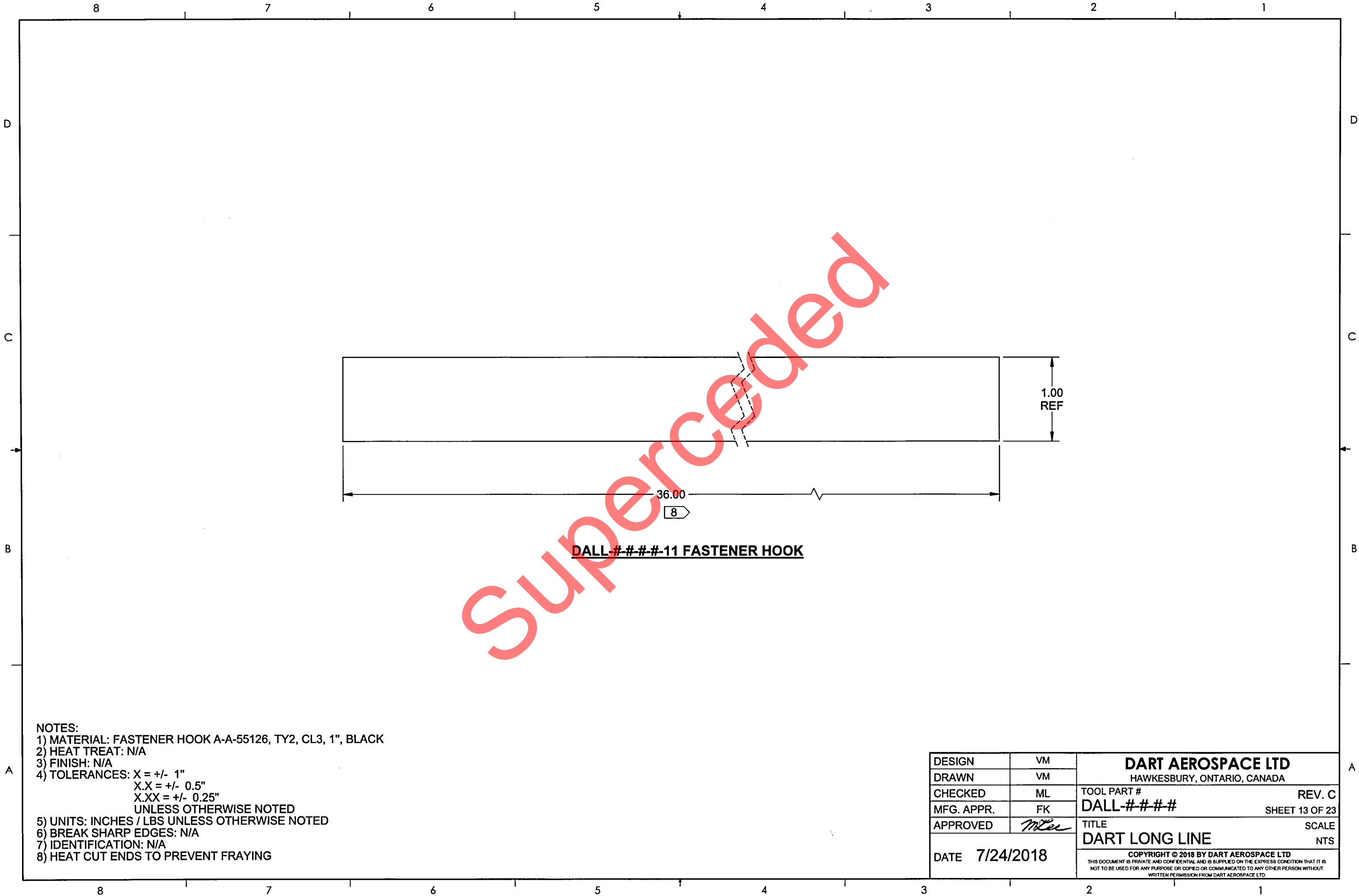
NOTES:  
1) MATERIAL: FASTENER LOOP A-A-55126, CL3, 1", BLACK  
2) HEAT TREAT: N/A  
3) FINISH: N/A  
4) TOLERANCES: X = +/- 1"  
                  X.X = +/- 0.5"  
                  X.XX = +/- 0.25"  
                  UNLESS OTHERWISE NOTED  
5) UNITS: INCHES / LBS UNLESS OTHERWISE NOTED  
6) BREAK SHARP EDGES: N/A  
7) IDENTIFICATION: N/A  
8) HEAT CUT ENDS TO PREVENT FRAYING

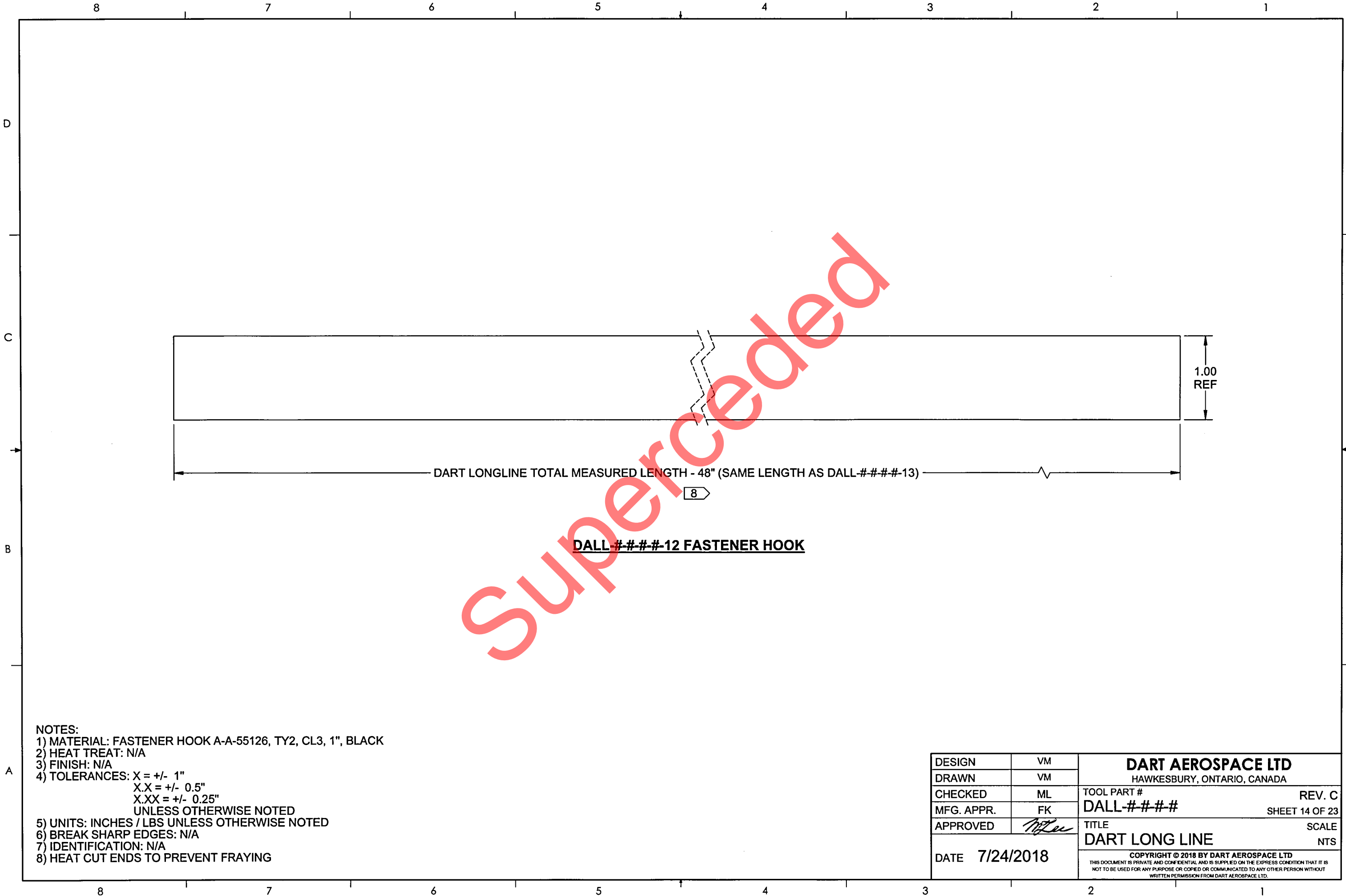
DESIGN	VM	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	ML	TOOL PART #	REV. C
MFG. APPR.	FK	<b>DALL-###-</b>	SHEET 11 OF 23
APPROVED	<i>ML</i>	TITLE	SCALE
DATE 7/24/2018		<b>DART LONG LINE</b>	NTS
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NOTES:  
1) MATERIAL: FASTENER HOOK A-A-55126, TY2, CL1, 2", BLACK  
2) HEAT TREAT: N/A  
3) FINISH: N/A  
4) TOLERANCES: X = +/- 1"  
                  X.X = +/- 0.5"  
                  X.XX = +/- 0.25"  
                  UNLESS OTHERWISE NOTED  
5) UNITS: INCHES / LBS UNLESS OTHERWISE NOTED  
6) BREAK SHARP EDGES: N/A  
7) IDENTIFICATION: N/A  
8) HEAT CUT ENDS TO PREVENT FRAYING

DESIGN	VM	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	ML	TOOL PART #	REV. C
MFG. APPR.	FK	<b>DALL-#-#-#</b>	SHEET 12 OF 23
APPROVED	<i>ML</i>	TITLE	SCALE
DATE 7/24/2018		<b>DART LONG LINE</b>	NTS
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NOTES:  
1) MATERIAL: FASTENER HOOK A-A-55126, TY2, CL3, 1", BLACK  
2) HEAT TREAT: N/A  
3) FINISH: N/A  
4) TOLERANCES: X = +/- 1"  
                  X.X = +/- 0.5"  
                  X.XX = +/- 0.25"  
                  UNLESS OTHERWISE NOTED  
5) UNITS: INCHES / LBS UNLESS OTHERWISE NOTED  
6) BREAK SHARP EDGES: N/A  
7) IDENTIFICATION: N/A  
8) HEAT CUT ENDS TO PREVENT FRAYING

DESIGN	VM	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	ML	TOOL PART #	REV. C
MFG. APPR.	FK	<b>DALL-####</b>	SHEET 14 OF 23
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DATE <b>7/24/2018</b>		<b>DART LONG LINE</b>	NTS
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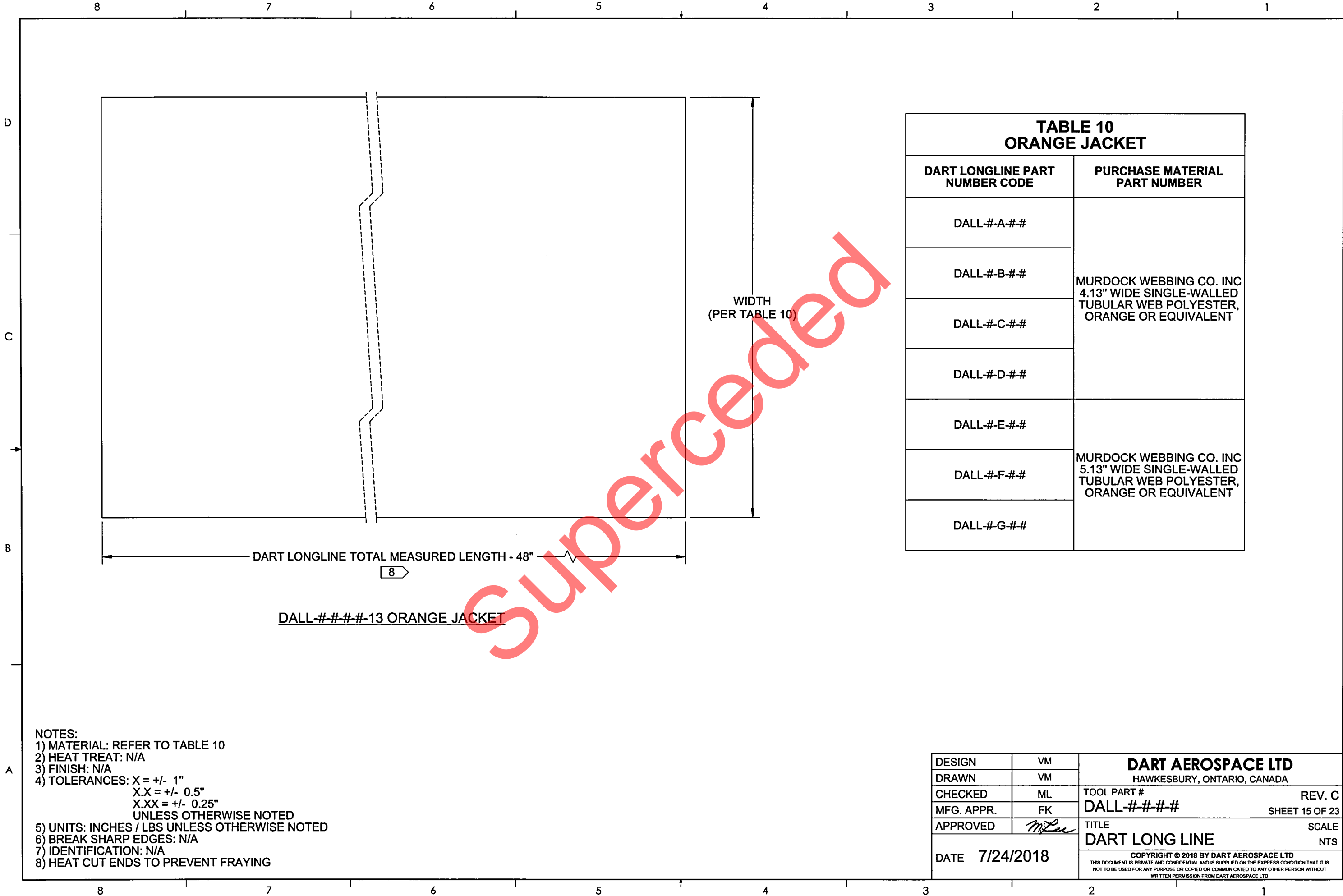
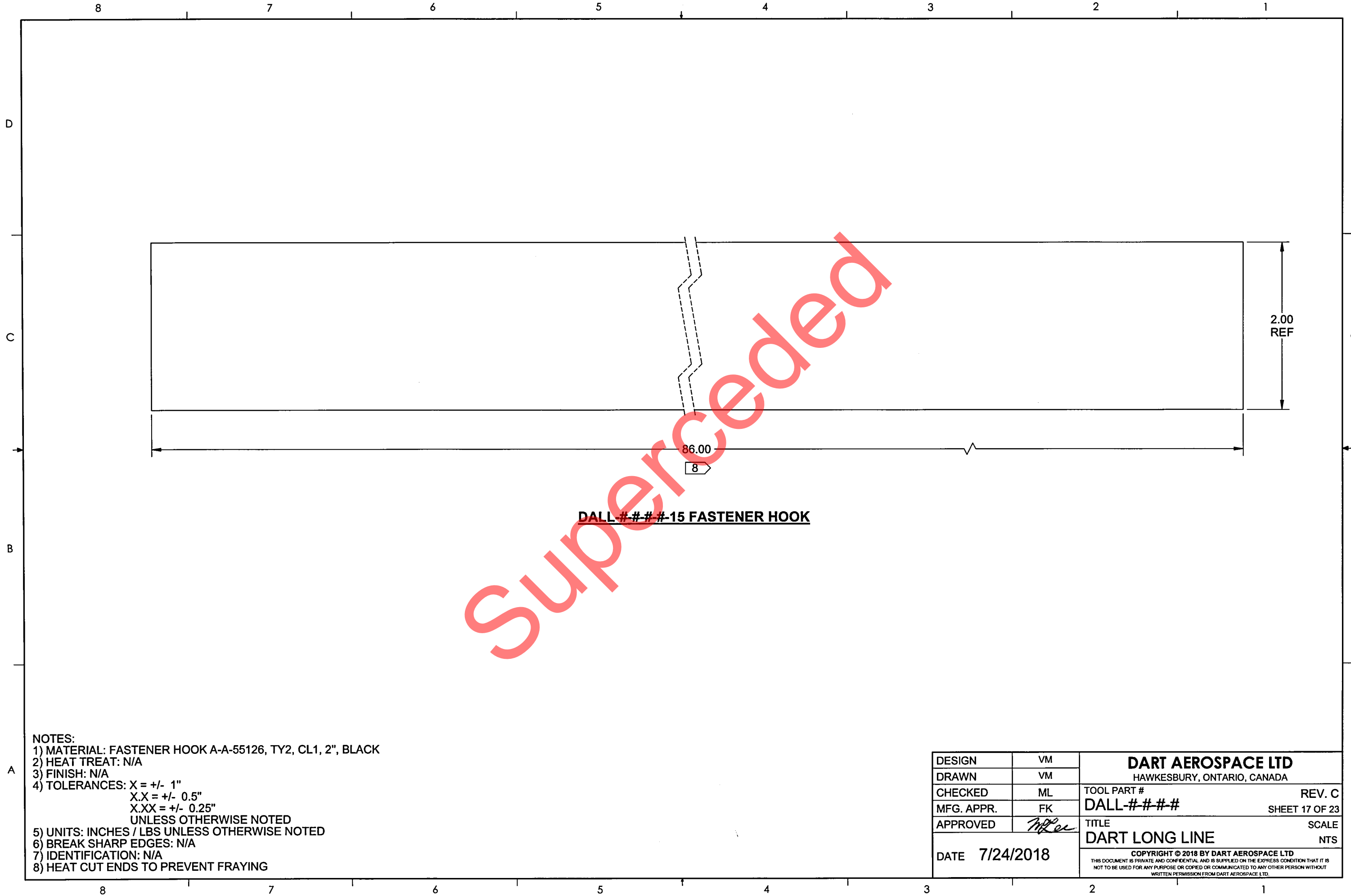


TABLE 10 ORANGE JACKET	
DART LONGLINE PART NUMBER CODE	PURCHASE MATERIAL PART NUMBER
DALL-#-A-##	MURDOCK WEBBING CO. INC 4.13" WIDE SINGLE-WALLED TUBULAR WEB POLYESTER, ORANGE OR EQUIVALENT
DALL-#-B-##	
DALL-#-C-##	
DALL-#-D-##	
DALL-#-E-##	MURDOCK WEBBING CO. INC 5.13" WIDE SINGLE-WALLED TUBULAR WEB POLYESTER, ORANGE OR EQUIVALENT
DALL-#-F-##	
DALL-#-G-##	

NOTES:  
1) MATERIAL: REFER TO TABLE 10  
2) HEAT TREAT: N/A  
3) FINISH: N/A  
4) TOLERANCES: X = +/- 1"  
                  X.X = +/- 0.5"  
                  X.XX = +/- 0.25"  
                  UNLESS OTHERWISE NOTED  
5) UNITS: INCHES / LBS UNLESS OTHERWISE NOTED  
6) BREAK SHARP EDGES: N/A  
7) IDENTIFICATION: N/A  
8) HEAT CUT ENDS TO PREVENT FRAYING

DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	ML	TOOL PART #	REV. C
MFG. APPR.	FK	DALL-#-#-#	SHEET 15 OF 23
APPROVED	<i>M. Lee</i>	TITLE	SCALE
DATE 7/24/2018		DART LONG LINE	NTS
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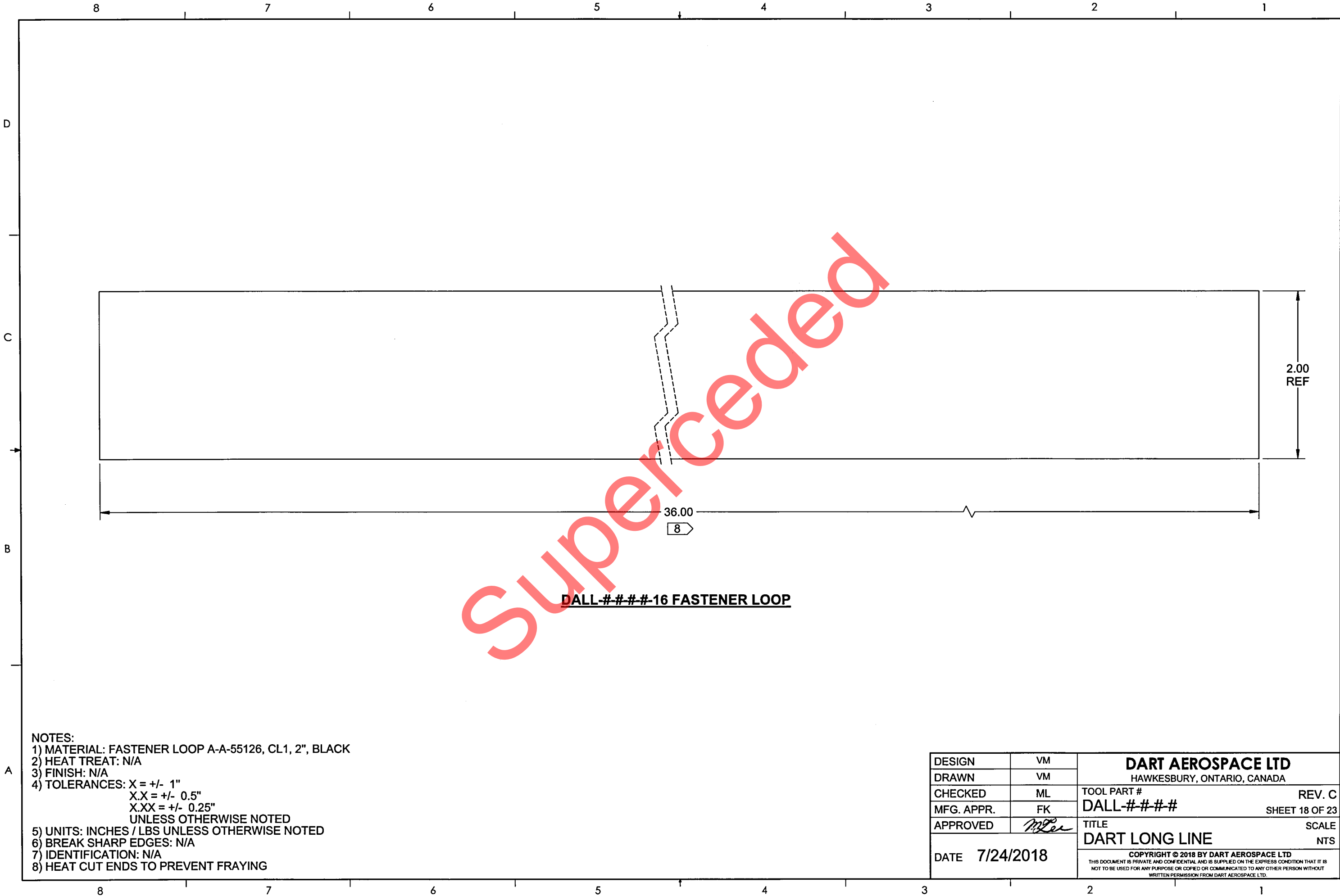


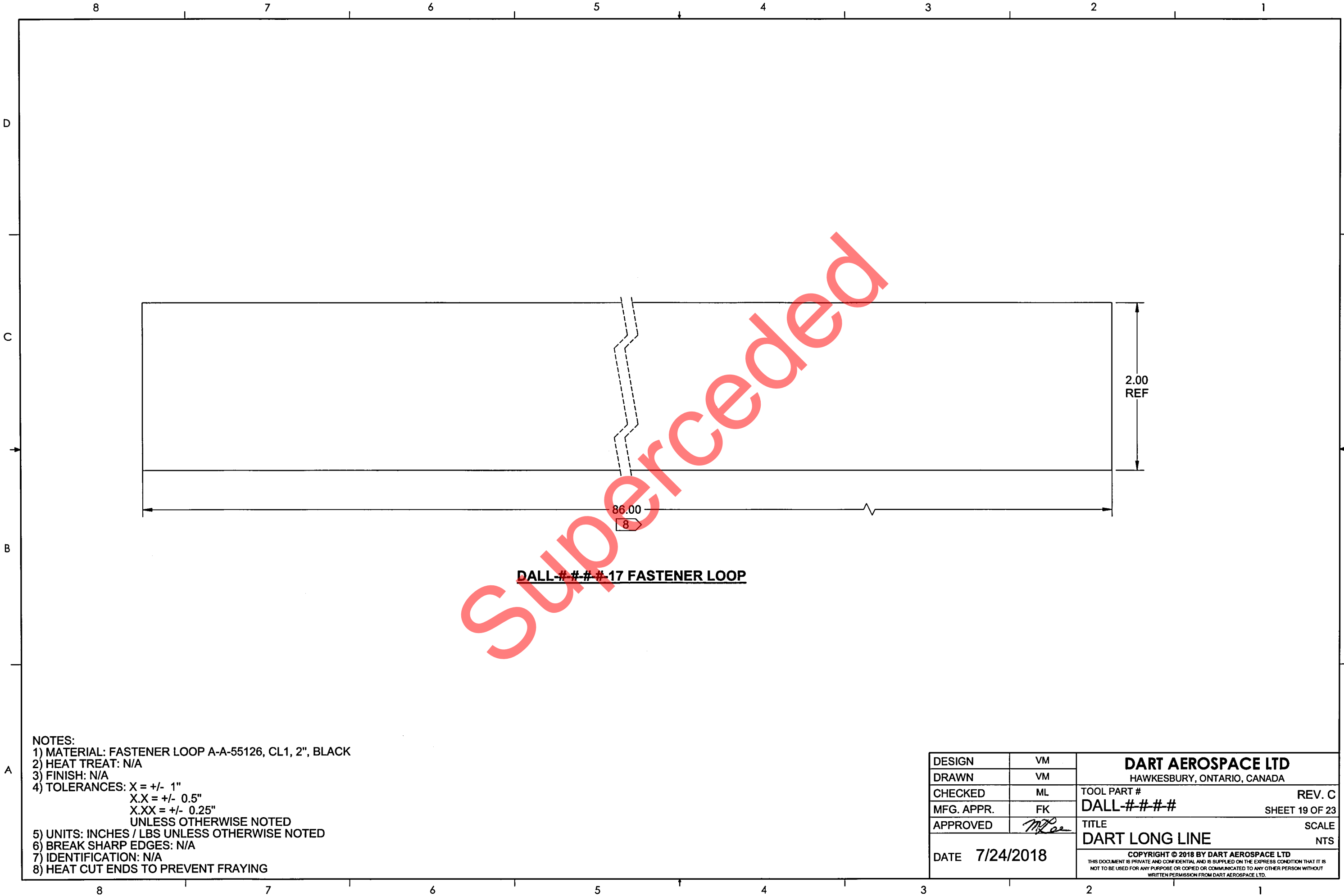


DALL-###-15 FASTENER HOOK

- NOTES:
- 1) MATERIAL: FASTENER HOOK A-A-55126, TY2, CL1, 2", BLACK
  - 2) HEAT TREAT: N/A
  - 3) FINISH: N/A
  - 4) TOLERANCES: X = +/- 1"  
X.X = +/- 0.5"  
X.XX = +/- 0.25"  
UNLESS OTHERWISE NOTED
  - 5) UNITS: INCHES / LBS UNLESS OTHERWISE NOTED
  - 6) BREAK SHARP EDGES: N/A
  - 7) IDENTIFICATION: N/A
  - 8) HEAT CUT ENDS TO PREVENT FRAYING

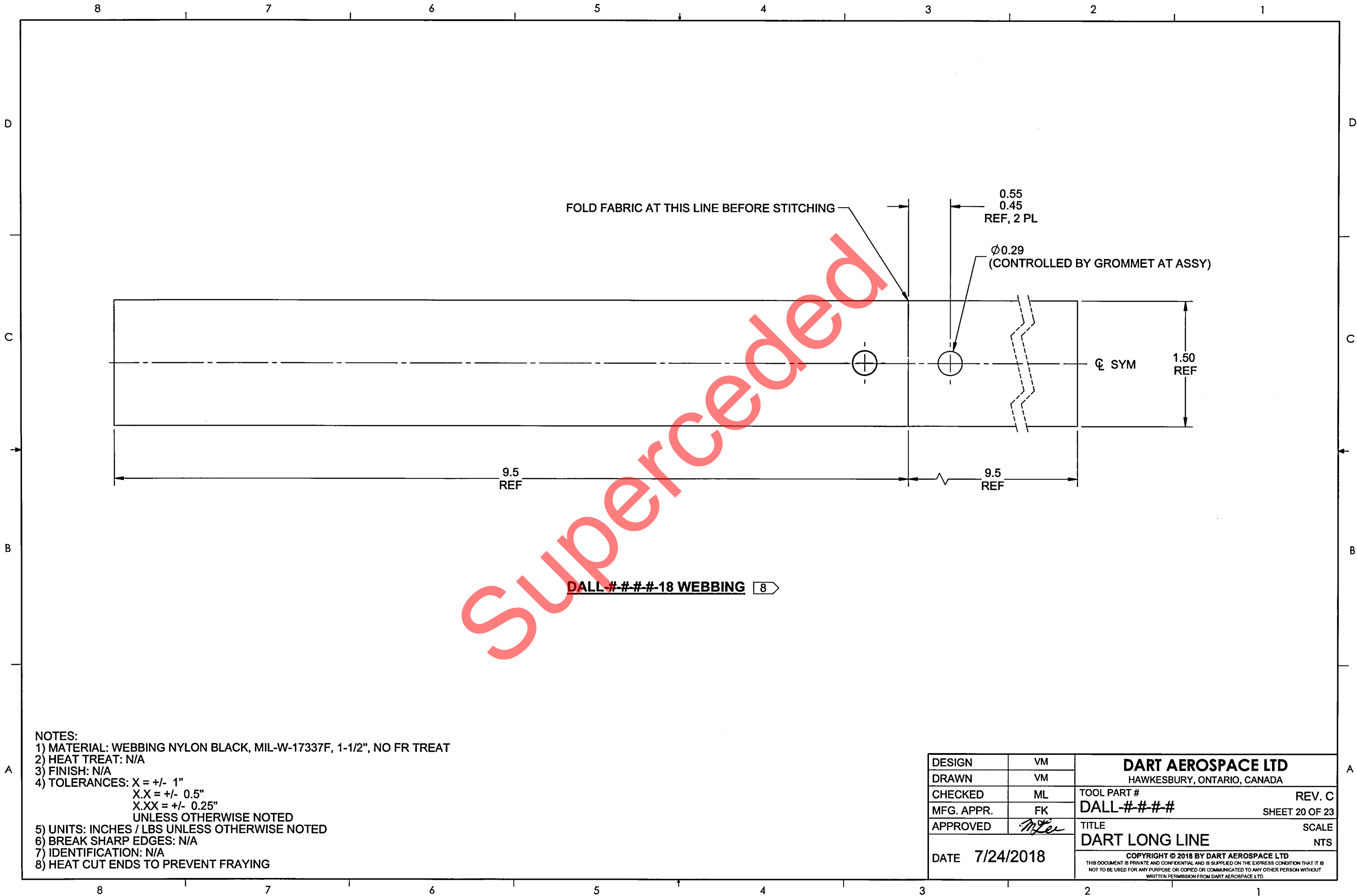
DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	ML	TOOL PART #	REV. C
MFG. APPR.	FK	DALL-###-	SHEET 17 OF 23
APPROVED		TITLE	SCALE
DATE 7/24/2018		DART LONG LINE	NTS
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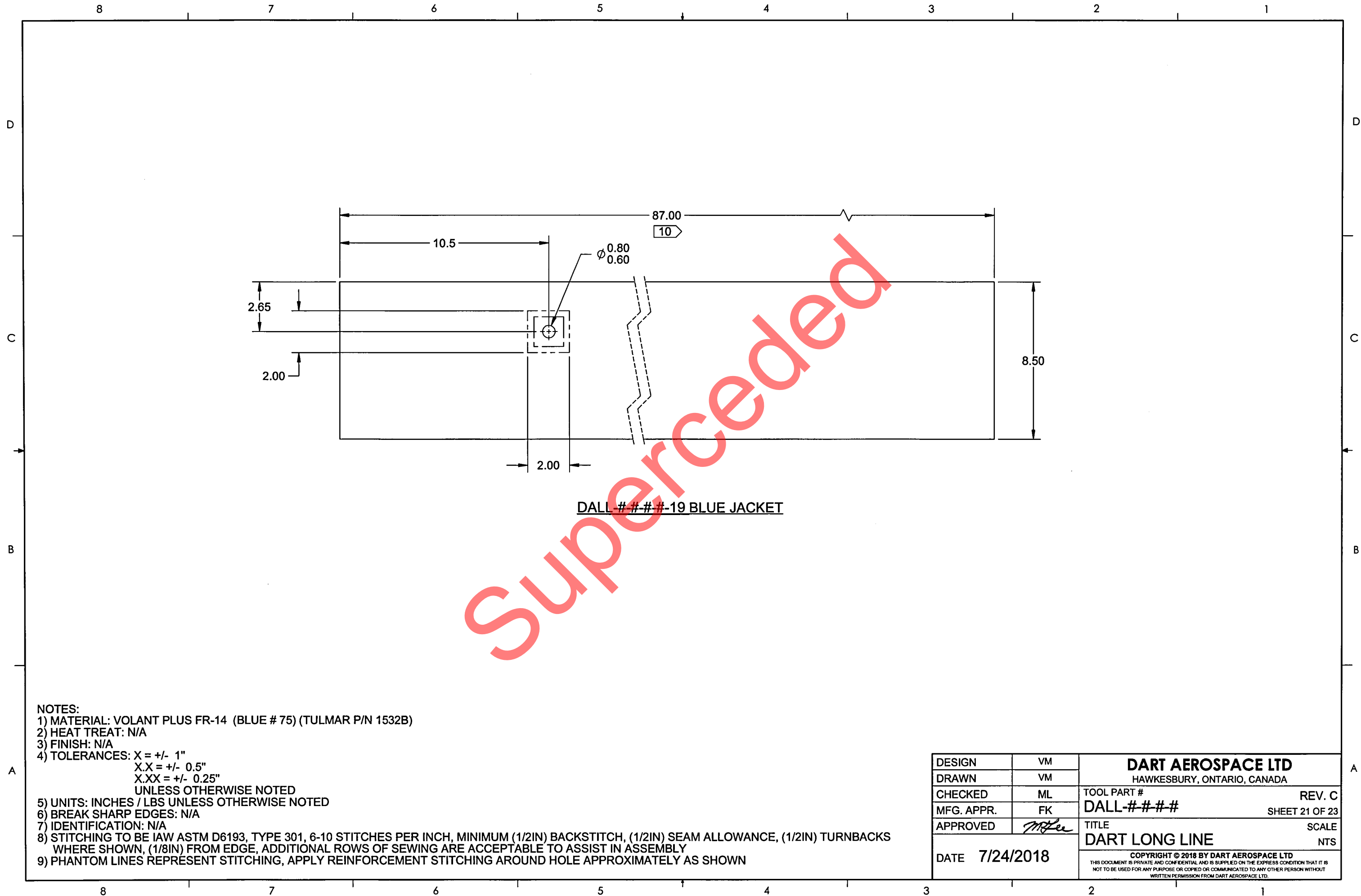


- NOTES:
- 1) MATERIAL: FASTENER LOOP A-A-55126, CL1, 2", BLACK
  - 2) HEAT TREAT: N/A
  - 3) FINISH: N/A
  - 4) TOLERANCES: X = +/- 1"  
X.X = +/- 0.5"  
X.XX = +/- 0.25"  
UNLESS OTHERWISE NOTED
  - 5) UNITS: INCHES / LBS UNLESS OTHERWISE NOTED
  - 6) BREAK SHARP EDGES: N/A
  - 7) IDENTIFICATION: N/A
  - 8) HEAT CUT ENDS TO PREVENT FRAYING

DESIGN	VM	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	ML	TOOL PART #	REV. C
MFG. APPR.	FK	<b>DALL-###-</b>	SHEET 19 OF 23
APPROVED	<i>ML</i>	TITLE	SCALE
DATE <b>7/24/2018</b>		<b>DART LONG LINE</b>	NTS
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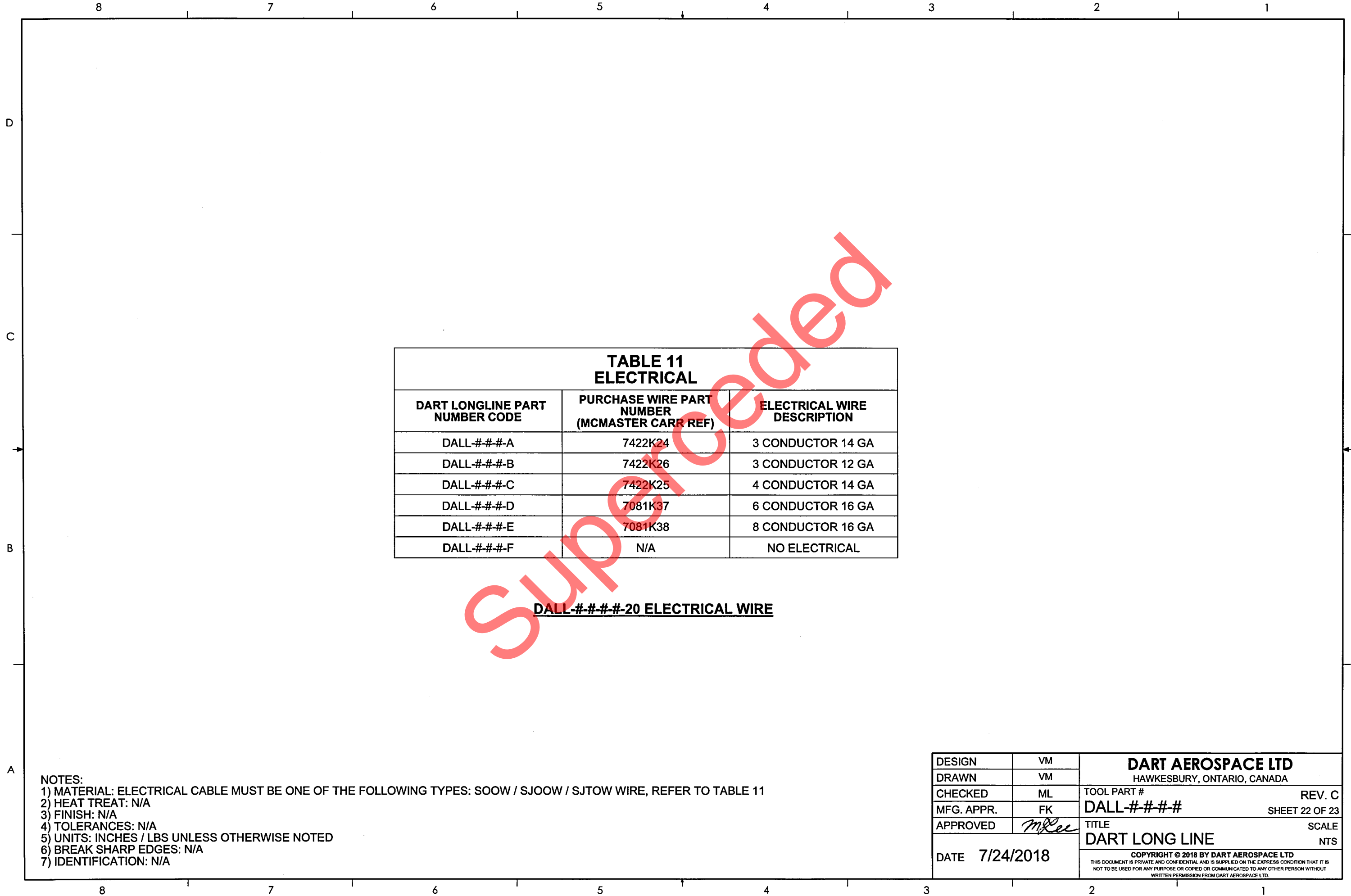


TABLE 11 ELECTRICAL		
DART LONGLINE PART NUMBER CODE	PURCHASE WIRE PART NUMBER (MCMaster CARR REF)	ELECTRICAL WIRE DESCRIPTION
DALL-###-A	7422K24	3 CONDUCTOR 14 GA
DALL-###-B	7422K26	3 CONDUCTOR 12 GA
DALL-###-C	7422K25	4 CONDUCTOR 14 GA
DALL-###-D	7081K37	6 CONDUCTOR 16 GA
DALL-###-E	7081K38	8 CONDUCTOR 16 GA
DALL-###-F	N/A	NO ELECTRICAL

DALL-###-20 ELECTRICAL WIRE

NOTES:  
1) MATERIAL: ELECTRICAL CABLE MUST BE ONE OF THE FOLLOWING TYPES: SOOW / SJOOW / SJTOW WIRE, REFER TO TABLE 11  
2) HEAT TREAT: N/A  
3) FINISH: N/A  
4) TOLERANCES: N/A  
5) UNITS: INCHES / LBS UNLESS OTHERWISE NOTED  
6) BREAK SHARP EDGES: N/A  
7) IDENTIFICATION: N/A

DESIGN	VM	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	ML	TOOL PART #	REV. C
MFG. APPR.	FK	<b>DALL-###-#</b>	SHEET 22 OF 23
APPROVED	<i>M. Lee</i>	TITLE	SCALE
DATE 7/24/2018		<b>DART LONG LINE</b>	NTS
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